

CLAIMS

1 1. A method of generating compiler products in a compressed form, said
2 method comprising:

3 compressing a portion of compiler information to obtain compressed
4 compiler information; and

5 producing a compressed compiler product based on at least the
6 compressed compiler related information.

1 2. A method as recited in claim 1, wherein the portion of the compiler
2 information being compressed by said compressing includes symbol names.

1 3. A method as recited in claim 2, wherein said compressing operates to
2 reduce the length of a plurality of the symbol names using a differential
3 encoding scheme.

1 4. A method as recited in claim 2, wherein said compressing comprises:
2 identifying a symbol name within the compiler information that is
3 encoded in an extended format encoding;

4 determining a differential encoding for the symbol name, the differential
5 encoding having a reduced-size format as compared to the extended format;
6 and

7 replacing the extended format encoding for the symbol name in the
8 compiler information with the differential encoding.

1 5. A method as recited in claim 4, wherein said compressing further
2 comprises:

3 determining a symbol name identifier; and

4 attaching the symbol name identifier to the differential encoding.

1 6. A method as recited in claim 5, wherein the symbol name identifier is a
2 container reference to indicate a container name associated with at least one
3 of the symbol names.

7. A method as recited in claim 1, wherein the source program is written in a programming language selected from a group consisting of Ada, C++, Fortran, Pascal, and Java.

8. A method as recited in claim 1, wherein the compressed compiler related product is an object code file or a source browser information file.

9. A method as recited in claim 1, wherein the compressed compiler related product is debugger information.

10. A method of generating symbol names in an uncompressed form, the symbol names being associated with compiler information, said method comprising:

identifying a compressed symbol name being associated with compiler information;

obtaining information relating to the compressed symbol name; and

decompressing the compressed symbol name based on the information relating to the compressed symbol name to obtain a symbol name in an uncompressed form.

11. A method as recited in claim 10, wherein said obtaining of information further comprises obtaining information referenced by a symbol reference that is included in the compressed symbol name, the symbol reference providing a reference to a base symbol that is associated with the symbol name that is represented by the compressed symbol name.

12. A method as recited in claim 11, wherein the base symbol is a container of the symbol that is represented by the compressed symbol name.

13. A compilation system suitable for compilation of source programs, said compilation system comprising: an enhanced compiler suitable for generation of enhanced compiler products, wherein the enhanced compiler compiles a source program to produce the enhanced compiler products with a reduced

5 size in comparison with conventional compiler products produced by
6 conventional compilers; and

7 at least one enhanced non-compiler component that understands and
8 utilizes the enhanced compiler products.

1 14. A compiler system as recited in claim 13, wherein reduction of size of
2 the enhanced compiler product is up to 40 percent of sizes of conventional
3 compiler products produced by conventional compilers.

1 15. A compiler system as recited in claim 13, wherein the enhanced
2 compiler product is a compiler related product selected from a group
3 consisting of an object file, an executable file, debugging information and
4 browser information.

1 16. A computer readable media including computer program code for
2 generating compiler products in a compressed form, said computer readable
3 media comprising:

4 computer program code for compressing a portion of compiler
5 information to obtain compressed compiler information; and

6 computer program code for producing a compressed compiler
7 product based on at least the compressed compiler related information.

1 17. A computer readable media as recited in claim 16, wherein the
2 compiler information being compressed by said compressing includes symbol
3 names.

1 18. A computer readable media as recited in claim 16, wherein said
2 computer program code for compressing operates to reduce the length of a
3 plurality of the symbol names using a differential encoding scheme.

1 19. A computer readable media as recited in claim 18, wherein said
2 compressing comprises:

3 computer program code for identifying a symbol name within the
4 compiler information that is encoded in an extended format encoding;

5 computer program code for determining a differential encoding for the
6 symbol name, the differential encoding having a reduced-size format as
7 compared to the extended format; and

8 computer program code for replacing the extended format encoding for
9 the symbol name in the compiler information with the differential encoding.

1 20. A computer readable media as recited in claim 16, wherein the
2 enhanced compiler related product is a compiler related product selected
3 from a group consisting of an object file, executable file, debugging
4 information, and browser information.

1 21. A computer readable media including computer program code
2 generating symbol names in an uncompressed form, the symbol names being
3 associated with compiler information, said computer readable media
4 comprising:

5 computer program code for identifying a compressed symbol name
6 being associated with compiler information;

7 computer program code for obtaining information relating to the
8 compressed symbol name; and

9 computer program code for decompressing the compressed symbol
10 name based on the information relating to the compressed symbol name to
11 obtain a symbol name in an uncompressed form.